Population Projection

Alberta and Census Divisions, 2017–2041

In 2041, Alberta's projected population is expected to:

- Reach 6 million, an increase of roughly 1.8 million people from 2016.
- Be older, with a median age of 40.2 years, up from 36.3 years in 2016.
- Be increasingly diverse, as arrivals from other countries account for about 47% of the expected growth.
- Be even more concentrated in urban centres, especially along the Edmonton-Calgary corridor; by 2041 almost 8 in 10 Albertans are expected to live in this region.

Population projections are now available for the period of 2017 to 2041 for Alberta and its 19 census divisions. Three different sets of assumptions (low, medium and high population growth scenarios) were prepared. This document highlights some characteristics of Alberta's projected population, focusing mainly on the results of the medium (reference) scenario unless otherwise indicated.

Alberta Population Projections

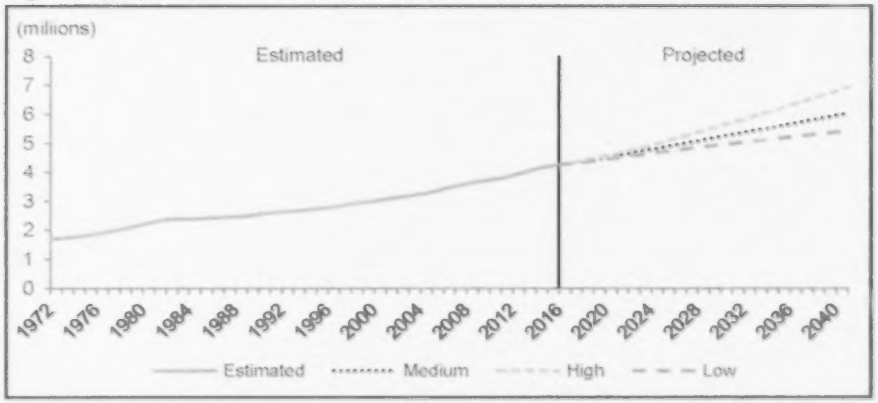
Alberta to see continued population growth overall

By 2041, Alberta is expected to be home to about 6 million people, representing an average annual growth rate of about 1.4% or an increase of about 1.8 million people from 2016 (Figure 1). This is quite a bit slower than the 2.0% experienced over the previous 25 year period (1991 to 2016). Alberta's population is projected to surpass the 5 million mark by 2028, and will reach the 6 million mark by 2041. Under the low and high scenarios, Alberta's total population in 2041 is projected to be around 5.4 million and 6.9 million; gains of 1.2 million and 2.7 million, respectively.

Although there are definite signs of economic recovery, the province's population growth will be lower in the short term, as outflows of some residents put a damper on net migration levels (Figure 2). Between 2016 and 2020, average annual growth is expected to be 1.4%, compared to 2.3% in the 2011-2016 period. A moderate recovery is expected between 2021 and 2026, where the average annual gain in population is expected to climb to 1.5%. In the latter part of the projection period (2026 to 2041), population growth is expected to slow gradually to an average annual rate of 1.4% due to moderating net migration, lower fertility rates and population aging.

Migration to Alberta is heavily dependent on the provincial economic situation, however it reacts with a lag. Although Alberta's economy is showing early signs of recovery, migration is forecasted to hit a low in 2017 before beginning to pick up. Alberta is forecasted to see continued net outflows of interprovincial migrants in 2017, before beginning to recover. However, this will be offset by immigration. Immigration is forecasted to slow from the 2016 high, but still remain higher than its long term historical trend. Net outflows of non permanent residents will also weigh on population growth over the next

Figure 1: Population of Alberta, 1972-2041



Sources: Statistics Canada and Alberta Treasury Board and Finance

About the Projections

The impact of the 2016 wildfires in Fort McMurray have not been fully captured in these projections. The 2016 population estimate for the region has not been adjusted to include fire impacts, in particular those who have left the region permanently. However, the migration forecast includes assumptions related to economic activity generated by the rebuild in that community.

Alberta Government

June 30, 2017
Treasury Board and Finance
Office of Statistics and Information - Demography

few years, due to Federal changes to the Temporary Foreign Worker Program and Alberta's economic conditions.

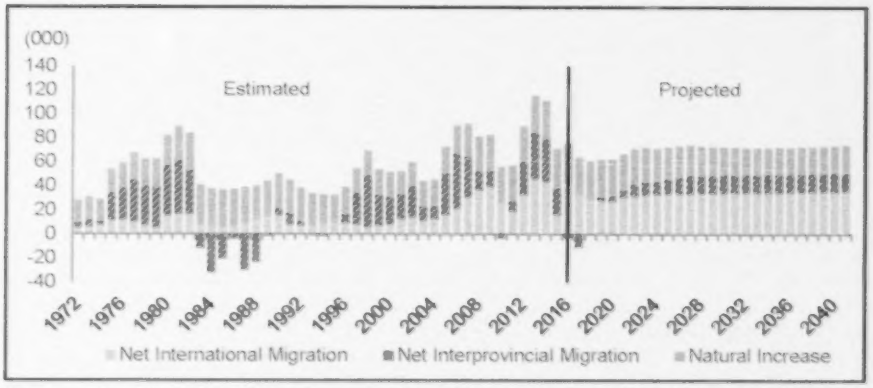
In all three scenarios, future population growth is mainly driven by migration, particularly international migration. For the period between 2016 and 2041, total net migration (1.12 million people) is projected to account for just under two-thirds of Alberta's population growth under the medium scenario, with natural increase accounting for the remaining 37% (Figure 2). Of the anticipated net migrants, three-quarters would come from other parts of the world. After hitting a low point in 2017, total net migration is expected to slowly pick up as the economy improves.

International migration: a primary population growth driver

About 47% of the expected population growth over the projection period will be due to international migration (Figure 2), representing a net gain of about 840,000 people. The addition of new residents from other countries will continue to add to the diversity of the province's population.

Figure 2: Components of Population Growth, 1972-2041

Alberta



Sources: Statistics Canada and Alberta Treasury Board and Finance

Alberta remains attractive to interprovincial migrants

Due to the slowdown in Alberta's economy, 2016 saw a net outflow of interprovincial migrants. Further weakening is expected with a net outflow in the first year of the projection period (Figure 2). A return to net inflows is expected as the economy improves. Net interprovincial migration will account for 16% of the growth, or around 285,000 new residents, between 2016 and 2041 under the medium scenario.

Natural increase remains a significant, but diminishing source of growth

Natural increase (births minus deaths) is expected to continue to have a positive impact on the province's growth, adding almost 650,000 people by 2041 (Figure 2). The magnitude of natural increase's contribution to population growth is expected to be partly influenced by migration patterns. The majority of the over 1.1 million (net) migrants projected to arrive over the next 25 years will be young adults aged 18-34. This expansion of Albertans in child-bearing ages will result in an increasing number of births over the projection period. Despite this, the impact of natural increase on growth will diminish over time, as deaths will increase rapidly with the advanced aging of the baby boom cohort.

For instance, on an average day in 2016, 159 new Albertans were born and about 68 people died. By 2041, the average number of daily deaths is expected to almost double (126), while births will likely increase to 190. The narrower gap between births and deaths in the future means that the average daily population gain due to natural increase will drop to 64 by 2041 from 91 in 2016.

Albertans are expected to live longer

A girl born in Alberta in 2016 could expect to live to 83.4 years of age, while a boy could see 78.9 years. Under the medium scenario, life expectancy at birth for females is projected to rise to 86.5 by 2041, while life expectancy for males is expected to reach 82.8 years. Consistent with historical trends, males are expected to see faster gains in life expectancy, and the gap between females and males will narrow from 4.5 years in 2016 to 3.7 years in 2041.

A man reaching age 65 in 2016 could expect to live, on average, another 19.0 years, compared to 21.9 for women. Life expectancy at age 65 is projected to increase to 21.0 years for men and 23.8 for women by 2041.

Alberta's population getting older

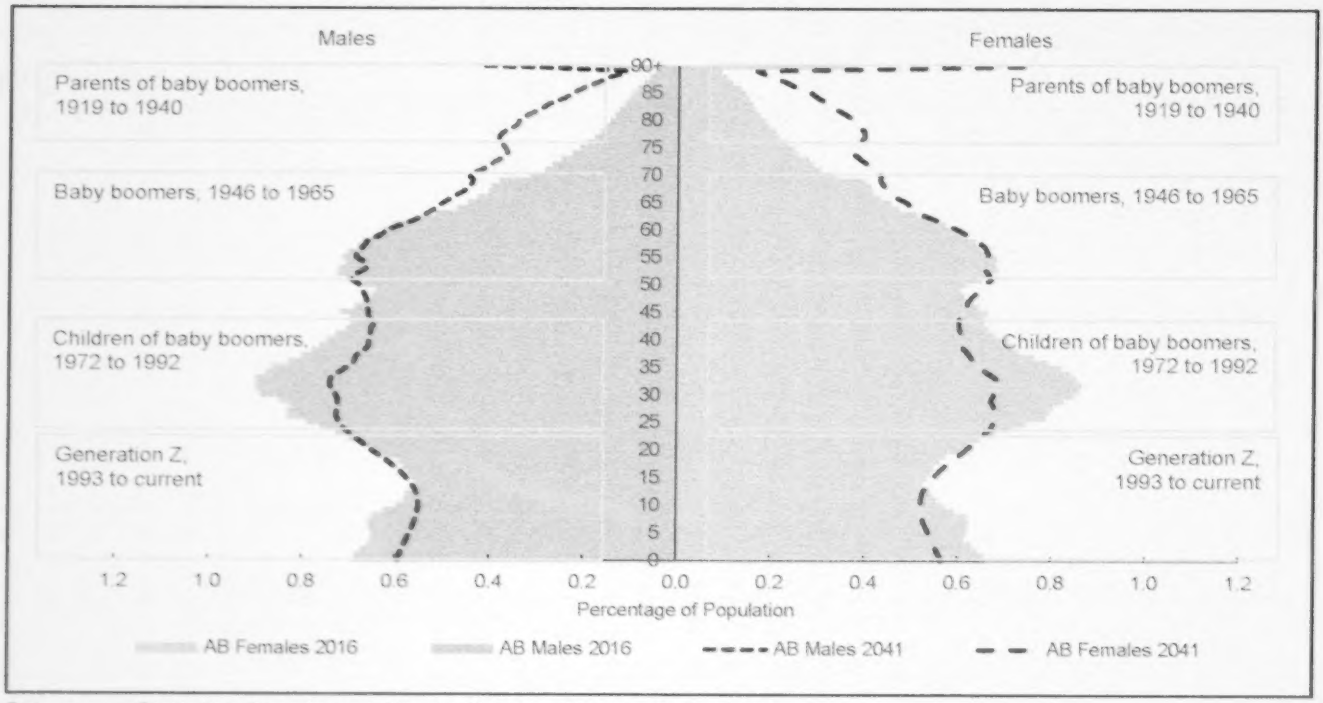
Alberta was the youngest province in 2016. However, its population is aging due to below replacement fertility and rising life expectancy. Despite the anticipated addition of a substantial number of young people through migration, population aging is expected to continue over the projection period (Figure 3). In 2016, the median age[1] of individuals in the province was 36.3 years and is projected to climb to 40.2 by 2041.

Baby boomers accelerate aging

The large baby boom cohort, who were born between 1946 and 1965, will have a significant impact on the rate of population aging over the next few decades. In 2016, these Albertans were aged 51 to 70 years and accounted for about 23% of the population (Figure 3). As the baby boomers get older, aging is expected

[1] The exact age at which half the population is younger and half is older.

Figure 3: Alberta's Population Pyramids, 2016 vs. 2041



Sources: Statistics Canada and Alberta Treasury Board and Finance
Note: Information boxes indicate generations in 2016.

to accelerate until 2030, when the last of that large group reaches the age of 65.

Those aged 65 and older represented about 12% of the population in 2016. Under the medium scenario, almost one in five, or 19% are expected to be 65 and older by 2041.

Males will continue to outnumber females

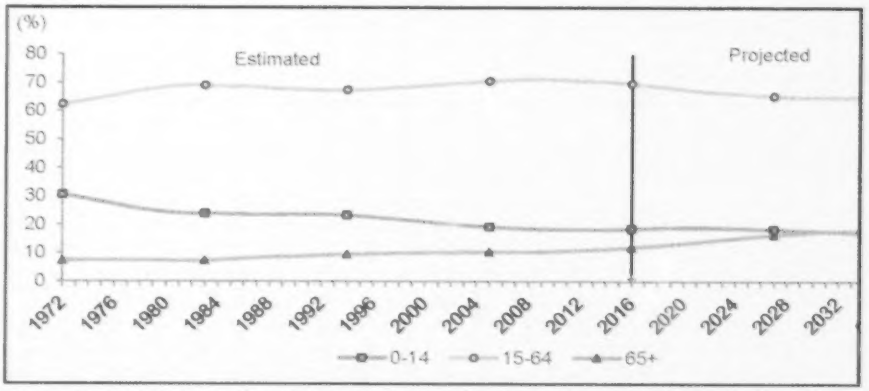
Alberta has consistently been home to more males than females, mainly due to the large proportion of working-age males migrating to the province. This trend in the sex ratio (ratio of males to females) is expected to continue.

While net migration inflows over the projection will continue to tip the province's overall sex ratio in favour of males, the aging of the large baby boom cohort into senior ages, and higher female life expectancies, will pull the sex ratio in favour of females. These two opposing forces will keep the sex ratio fairly stable over the projection at 103 males per 100 females.

More people depend on the working age population

The number of working age Albertans (aged 15 to 64 years) is expected to grow under all scenarios, increasing from about 3 million in 2016 to almost 3.9 million by 2041 under the medium scenario. However, as a share of the

Figure 4: Proportion of Total Population by Age Group, 1972-2041
Alberta



Sources: Statistics Canada and Alberta Treasury Board and Finance

total population, this age group is anticipated to shrink, falling from around 70% in 2016 to about 65% in 2041 (Figure 4).

Due to the rising share of seniors and the declining share of working age population, the total dependency ratio[2] is expected to increase significantly over the projection period. In 2016, there were 44 dependents for every 100 Albertans aged 15 to 64 years. By 2041, it is expected that the total dependency ratio will climb to about 55. The higher ratio will mainly be driven by the rapid increase in the senior (65+) portion of the population (Figure 5).

Age Structure of Alberta

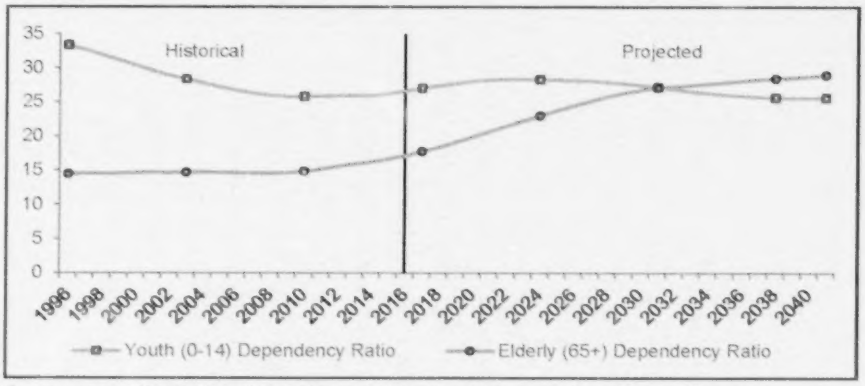
By 2041, there will be more people of every age compared with 2016. The baby boomers will be swelling the ranks of the province's oldest residents, while their children, who are the oldest of the 'echo' generation, will have just entered their senior years (Figure 6). The next section outlines the projected size of specific age groupings.

Stable numbers of young children and growing in school ages

The size of the youngest age group (0 to 4 years) is mainly impacted by the number of births and is a good barometer of possible demand for elementary

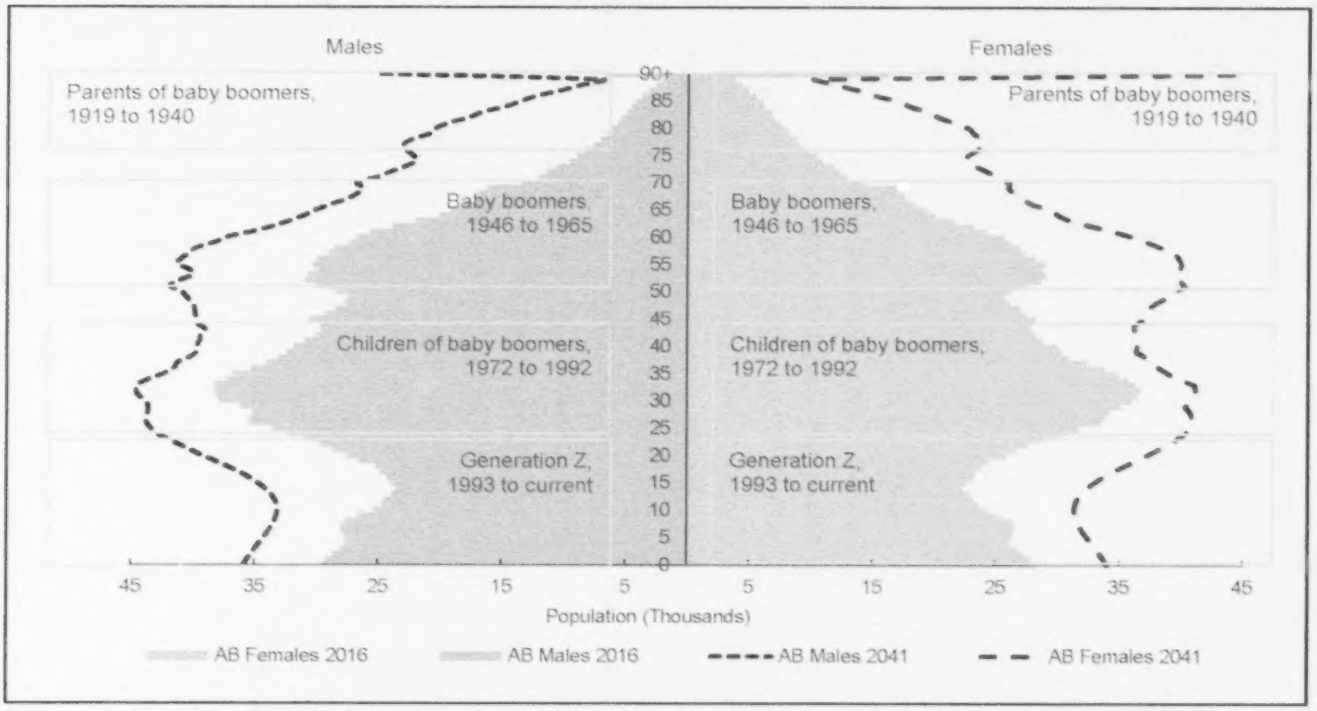
[2] The dependency ratio refers to the population not typically in the labour force (children and the elderly) to the population that typically is (those aged 15 to 64).

Figure 5: Dependency Ratios (per 100 working age individuals), 1996-2041
Alberta



Sources: Statistics Canada and Alberta Treasury Board and Finance

Figure 6: Age/Sex Population (Thousands), Alberta, 2016 and 2041



Sources: Statistics Canada and Alberta Treasury Board and Finance
Note: Information boxes indicate generations in 2016.

education in the near future. After an increase in the first few years, the size of this age group remains relatively stable at around 300,000 pre-gradeschool children until the last decade of the projection, and by 2041 is expected to hit almost 345,000.

The population aged 5 to 17 years represents potential school demand. The number of school-aged children will likely continue to rise throughout the projection due to Alberta's fertility and migration rates, and growth is particularly strong to 2025. Between 2016 and 2025, this age group is expected to increase at an average annual rate of 2.1% (Figure 7), adding over 130,000 new school aged children. By 2041, this age cohort is will likely number more than 860,000.

An expansion of those in working ages, but a declining share

The young adult cohort (aged 18 to 24 years) is usually associated with attending post-secondary institutions or participating in the youth labour force. In 2016, the share of the population for this cohort was about 9% and is projected to be relatively stable throughout the projection. However, in the short term, the size of this age group will drop from about 390,000 in 2016 to about 370,000 in 2020 because of a smaller cohort moving into this age group. The number of young adults is expected to increase steadily, as migration picks up, reaching just over 545,000 in 2041 (Figure 8).

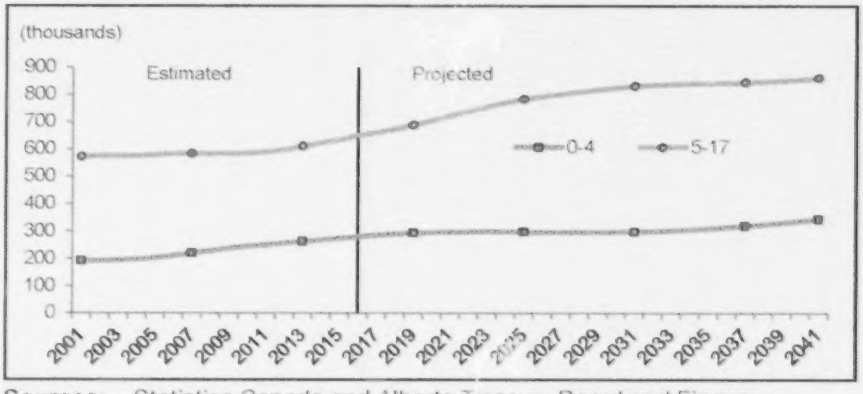
The core labour force age group (25 to 54 years) will increase in size throughout the projection period, although the expansion will be slower in the first few years. This is due to the impact of lower expected levels of migration on this cohort in the short term, as well as the departure of the youngest baby boomers from the core labour force (Figure 8). Despite the growth in numbers, this cohort as a share of the total population will decline from 45% in 2016 to just 40% by 2041 as baby boomers leave the workforce. In 2016, the youngest baby boomers were 51 years of age; 12% in the core working age group were baby boomers. By 2020, all of the baby boomers will have aged out of the core labour force, but numbers will continue to rise due to migration.

The overall working age population (15 to 64 years) will also grow, but it shows a similar slowdown in the first few years of the projection (Figure 8). The working age cohort is expected to expand by 32% over the projection period, but since the overall population will also expand by 42%, this age group will make up a declining share of the total population.

Aging boomers accelerate growth of senior population

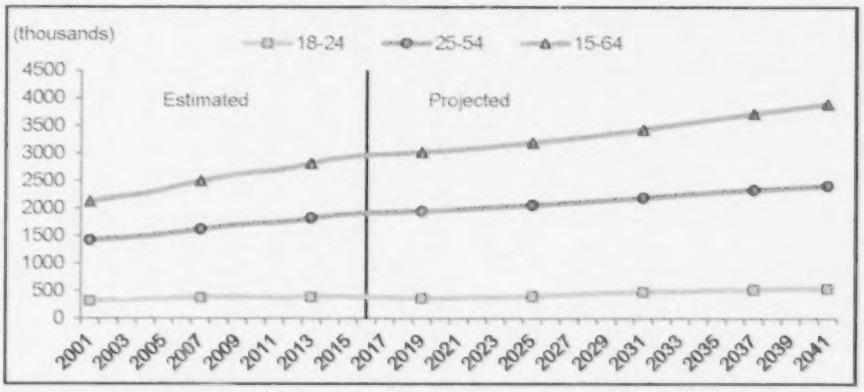
The population aged 65+ is expected to increase both in number and population share throughout the projection period. In 2016, over 505,000 Albertans were aged 65 and older, accounting for about 12% of the population. The number of seniors is expected to top a million by 2035 and exceed 1.1 million by 2040 (Figure 9). Under the medium scenario, almost one in every 5 Albertans in 2041 would be 65 or older. In 2016, there were about 422,000 more children (aged 0 to 17 years) than seniors. By 2041, this difference will likely shrink to under 80,000.

Figure 7: Population Aged 0 to 17 years, 2001-2041
Alberta



Sources: Statistics Canada and Alberta Treasury Board and Finance

Figure 8: Population Aged 15 to 64 years, 2001-2041
Alberta

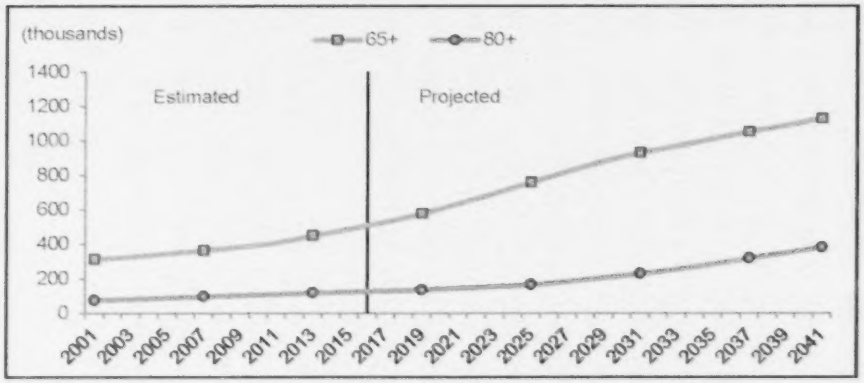


Sources: Statistics Canada and Alberta Treasury Board and Finance

Rapid growth of the oldest-old

In assessing demand for services such as health care, assisted living and seniors' housing, it is especially important to look at those 80 years and older. This age group is expected to double as a share of the population, increasing from 3% in 2016 to 6% in 2041, which represents an absolute increase of about 255,000 80+ year olds and a percentage increase of 204% (Figure 9).

Figure 9: Population Aged 65 and older, 2001-2041
Alberta



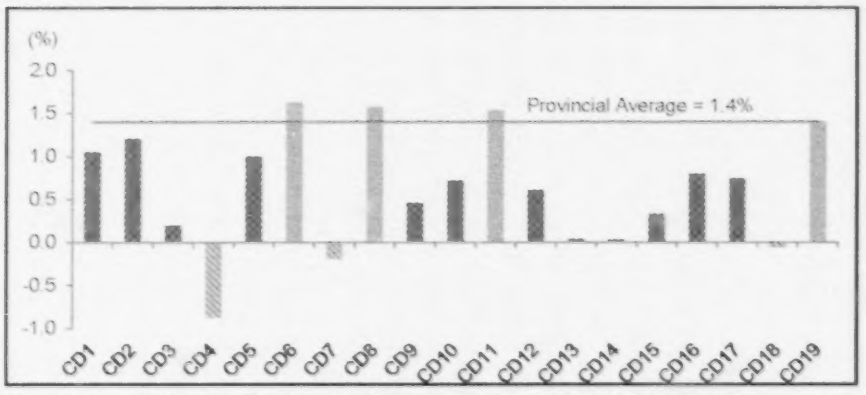
Sources: Statistics Canada and Alberta Treasury Board and Finance

Regional Population Projections

Regional population growth is determined by the current age structure, natural increase and gains or losses through migration. The next section highlights some characteristics of the 19 CDs in Alberta.

The current age structure is a major determinant of the number of births and deaths. A region with a greater proportion of older people will likely experience more deaths, whereas a region with a large proportion of young adults will likely see more births. In addition, since migration is an activity undertaken primarily by young adults, the age structure will impact the region's migration patterns.

Figure 10: Average Annual Population Growth by Census Division, 2016-2041
Alberta



Sources: Statistics Canada and Alberta Treasury Board and Finance

Older regions, those with a greater share of seniors in the population, are more likely to experience very low or negative natural increase leading to downward pressure on population growth (Appendix - Map 1). The oldest regions of the province in 2016 were CD 4 (Hanna), CD 13 (Whitecourt) and CD 7 (Stettler) with median ages of 41.9, 41.9 and 40.4 years, respectively. These three are among the regions projected to see the least growth from natural increase over the projection.

Migration is a key determinant of population growth for most regions. It is common for regional patterns of migratory movements to be relatively consistent over time. Some regions have, for many years, seen their young people move to other regions of the province (intraprovincial migration); for example, CD 17 (Slave Lake), CD 19 (Grande Prairie) and CD 2 (Lethbridge). Other regions have a long-standing and significant attraction to interprovincial migrants. Some regions gain from the settlement choices of immigrants, while others receive almost none. Some regions, such as CD 16 (Wood Buffalo) tend to draw a significant number of interprovincial migrants, yet tend to lose population to other parts of the province at the same time, leading to lower growth from migration than might be expected.

In general, the largest centres in Alberta capture most of the growth from international migration sources, while also gaining from migratory movements both within Alberta and between provinces (Appendix - Map 2).

Most regions expected to see population growth

With the exception of three census divisions, CD 4 (Hanna), CD 7 (Stettler), and CD 18 (Grande Cache), all regions in Alberta are expected to see positive growth over the projection period. Although the population of CD 18 is expected to shrink, the decrease is marginal (average annual growth of -0.05%) and the population is relatively stable (Figure 10). CD 3 (Pincher Creek),

CD 13 (Whitecourt), and CD 14 (Edson) are also expected to have relatively stable populations due to minimal expected growth over the projection period. The strongest growth is projected to occur in the Edmonton-Calgary corridor (CDs 6, 8 and 11) and in CD 19 (Grande Prairie) (Appendix - Map 3).

Regional Age Structure

Overall increase in children, but shrinking share

There is considerable regional variation in the proportion of the population in the age group 0 to 14 years. At the top end, about 28% of CD 17's (Slave Lake) population was under the age of 15, and at the other end of the spectrum, the proportion of children in CD 15 (Banff) was a little over 14% in 2016. The share of children is projected to drop or remain fairly stable in all census divisions. CD 16 and CD 15 are expected to show the greatest drop in share of 0-14 year olds (-3.64 and -3.34 percentage points, respectively), which is primarily due to population aging and the proportions of their childbearing cohorts. Census division 15 also has very low fertility. Census divisions 17 and 15 will continue to have the highest and lowest population shares of children, respectively, in 2041.

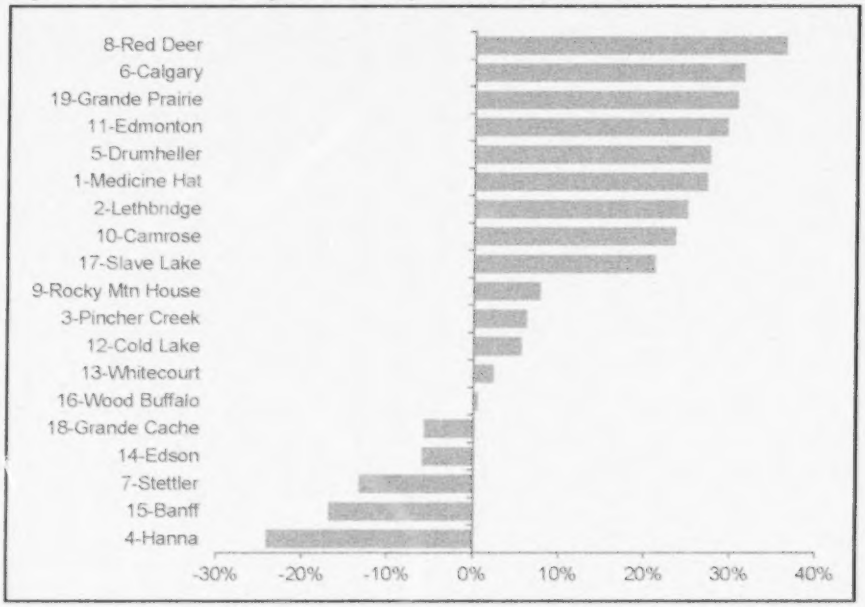
While regional population shares of children are expected to drop, the absolute number of children will increase in most census divisions (Figure 11). The largest absolute increases in the number of children are expected in CD 8 (Red Deer), CD 6 (Calgary), and CD 11 (Edmonton), which is mainly due to the large size of their overall populations. These three census divisions, together with CD 19 (Grande Prairie) and CD 5 (Drumheller), make up the five regions with the largest percent growth of children over the projection period.

Proportion of working age to shrink in every region

All but seven census divisions are projected to see an increase in the absolute number of people in working ages (15 to 64 years) between 2016 and 2041 (Figure 12).

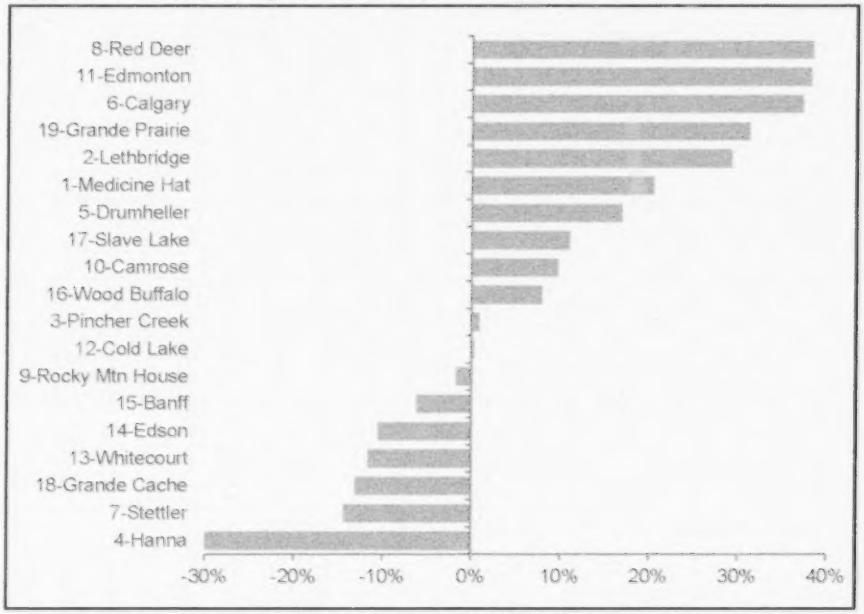
Since migrants are predominantly young adults, those regions who receive the most net migrants are expected to see the greatest gains. The three census divisions that make up the Edmonton-Calgary Corridor claim the top spot, followed by CD 19 (Grande Prairie) and two southern regions, CD 2

Figure 11: Percent change of 0 to 14 year olds, 2016-2041



Sources: Statistics Canada and Alberta Treasury Board and Finance

Figure 12: Percent change of 15 to 64 year olds, 2016-2041



Sources: Statistics Canada and Alberta Treasury Board and Finance

(Lethbridge) and CD 1 (Medicine Hat). Not surprising, given the projected contraction of its overall population, CD 4 (Hanna) is expected to see the largest drop in its working age population.

In 2016, the regions with the highest share of the working age population were CD 16 (Wood Buffalo), CD 15 (Banff), CD 6 (Calgary) and CD 11 (Edmonton); all had shares over the Alberta average of almost 70%. In contrast, close to 6 out of 10 people in CD 3 (Pincher Creek) were of working age. The share of population aged 15 to 64 will decline in all census divisions between 2016 and 2041. CD 11, CD 16 and CD 6 will continue to have the highest shares above the provincial average of 65%.

Regional differences in population aging

In 2016, roughly one in nine Albertans was 65 years of age and over, while this number is expected to be roughly one in five by 2041. The proportion of the population aged 65+ varies regionally throughout the province due to different age structures and migration flow patterns (Figure 13). In 2016, CD 3 (Pincher Creek) and CD 4 (Hanna) had the highest shares of seniors among the CDs at around 19% and 18%, respectively, while Wood Buffalo (CD16) had the lowest share (2.9%). In 2041, it is expected that CD 4 (Hanna) will have the highest share of seniors at about 29%, whereas CD 17 (Slave Lake) will have the smallest share with 14% of the population aged 65 years and over.

Focus on selected regions

The following sections highlights some of the factors contributing to projected growth for select regions in the province.

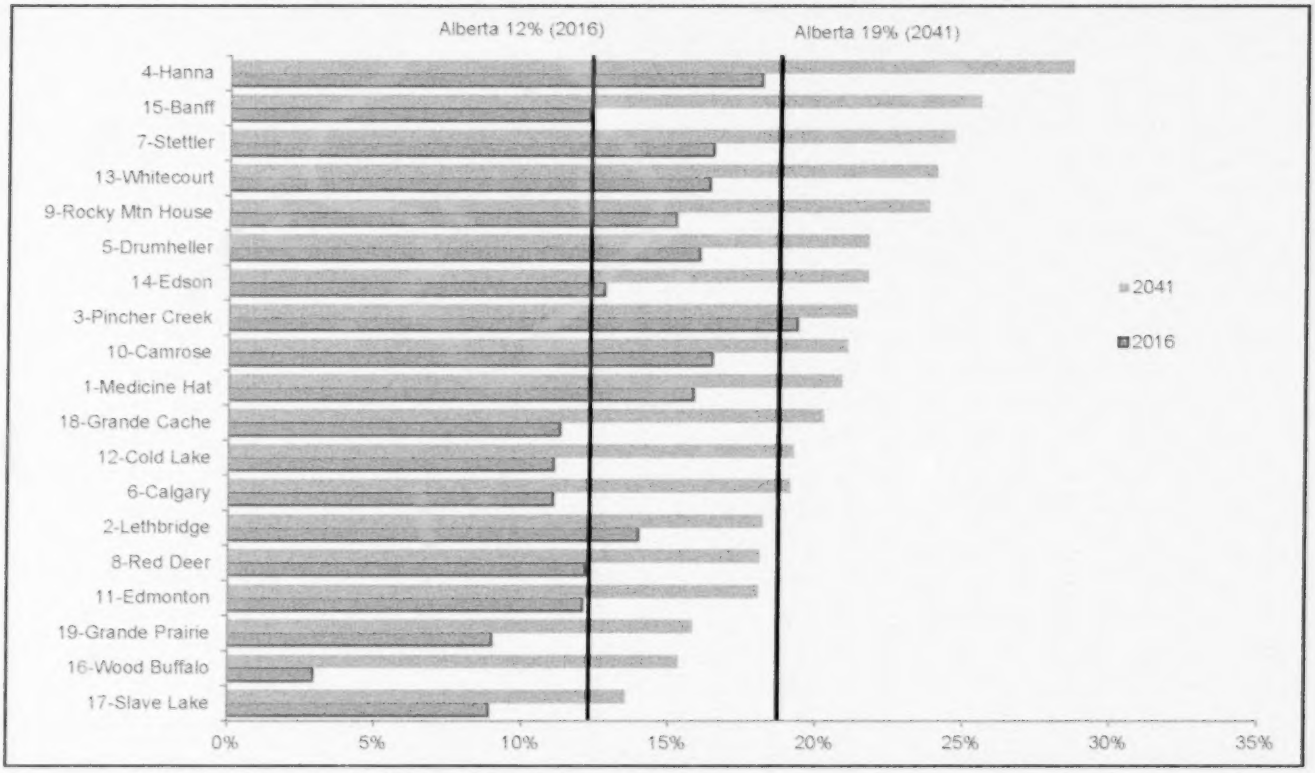
Edmonton-Calgary corridor: urbanization continues

The Edmonton-Calgary corridor consists of three CDs (6, 8 and 11) and includes the Census Metropolitan Areas of Edmonton and Calgary, as well as the city of Red Deer. Covering only 6% of the land area, the corridor is home to 76% of the population and is the most urbanized area of the province[3]. Projected growth in all three of these CDs will outpace the provincial average (Appendix - Map 3). By 2041, almost four out of five Albertans are expected to live in this region.

The anticipated growth in the Edmonton-Calgary corridor is supported by historical migration patterns within the province. As the most populous region of Alberta, this area attracts most of the international migrants to the province, as well as about two thirds of the migrants from other parts of Canada. On average,

[3] 2011 Census of Canada, Statistics Canada

Figure 13: Population Aged 65 and over as a Percent of Total Population, Census Divisions, 2016 and 2041



Sources: Statistics Canada and Alberta Treasury Board and Finance

about nine out of ten immigrants originally migrate to this region. In addition, each of the census divisions that make up the corridor tend to gain residents through migration from other parts of the province.

Migration patterns of the three most urban census divisions are expected to reflect those of the province as a whole.

Wood Buffalo: A shifting population structure

The economic slowdown has impacted CD 16's (Wood Buffalo) population age structure. The years of high oil prices attracted large numbers of male migrants and exaggerated a sex distribution that already had more males than females. Net outflows produced by the recession have been mostly male migrants. As a result, the sex ratio is shifting back towards a more balanced state although the region continues to have significantly more males than females. Over the projection period, relatively high fertility and fewer economic pull factors for male migrants in particular means the population of CD 16 is slowly shifting away from a resource based community.

Driven by strong net outflows of interprovincial migrants, CD 16's population is forecasted to shrink in 2017 before beginning a modest growth, as the economy continues to adjust to lower oil prices. However, given economic activity generated by rebuilding from the Fort McMurray fires, these net outflows in 2017 have been revised up from last years' projections. As oil prices improve later in the projection period, and activity picks up, the region is expected to gradually return to a more moderate level of positive net migration.

Natural increase has a fairly substantial impact on the growth in this region, and is expected to offset the net outflows of migrants after 2017. Over the entire projection, natural increase accounts for a large proportion of CD 16's growth. Thanks to its young population, there are relatively few deaths and a significant number of births. Overall, average annual growth for CD 16 is projected at 0.8% between 2016 and 2041, similar to last year's projection.

Grande Prairie: a service centre for Alberta and British Columbia

CD 19, which includes the city of Grande Prairie, has experienced robust growth over the last decade or so. At 1.4%, the region's average annual growth (between 2016 and 2041) is expected to remain slightly above the provincial average (Appendix - Map 3).

The regional economy has a large natural resources sector component, including oil and gas, forestry, and agriculture. The city of Grande Prairie is a service area for northwestern Alberta and northeastern British Columbia, regions with abundant reserves of oil and gas. While resource activities may attract more males, the service sector is expected to attract a more balanced mix of people. Compared with CD 16 (Wood Buffalo), for example, CD 19's (Grande Prairie) sex ratio is much less skewed to males, and the region is more attractive to young adults of both sexes. As a result, the population in CD 19 contains momentum for future growth.

Due to the oil and gas and service sector nature of this region, CD 19 has been impacted by low oil prices, with small net outflows of migrants forecasted for the next couple of years. However, because of the diversity of this region, and the up-tick in gas and conventional drilling, CD 19 should see their migration impacted less than other oil dependent regions. Population growth in this region is expected to remain positive throughout the projection.

Lethbridge: Alberta's newest CMA

Lethbridge (CD 2) was designated the province's newest CMA in the 2016 Census after hitting a size and density that puts it in the company of other metropolitan areas in the country. CD 2 is an economically diverse region with industries such as agriculture, government, and manufacturing. Given its diversified economy, CD 2 has become an increasingly attractive destination for migrants to the province, and will likely continue to draw families to the region. This region also attracts young adults due in part to its post-secondary institutes. Given its young age structure and higher than average fertility, CD 2 has the potential for continued future growth.

For more information on the *Population Projections* **see:**

Data for Alberta Population Projections.

Includes estimated (1996-2016) and projected (2017-2041) population of Alberta and its 19 Census Divisions by single year of age and sex as well as some summary statistics.

Population Projection Methodology and Assumptions.

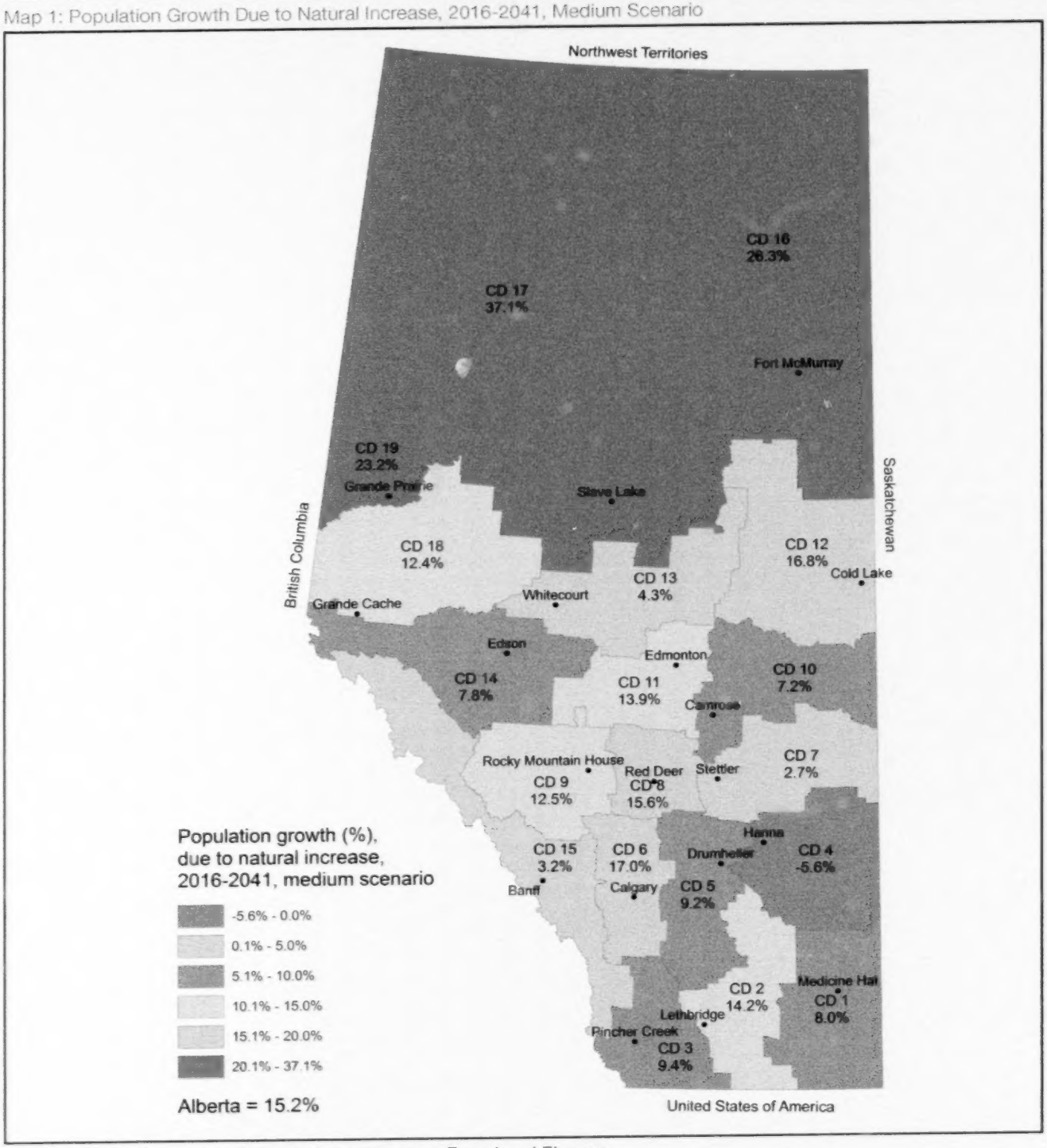
Details the methodology and assumptions of the long-term population projections.

Contact

Jennifer Hansen 780.427.8811

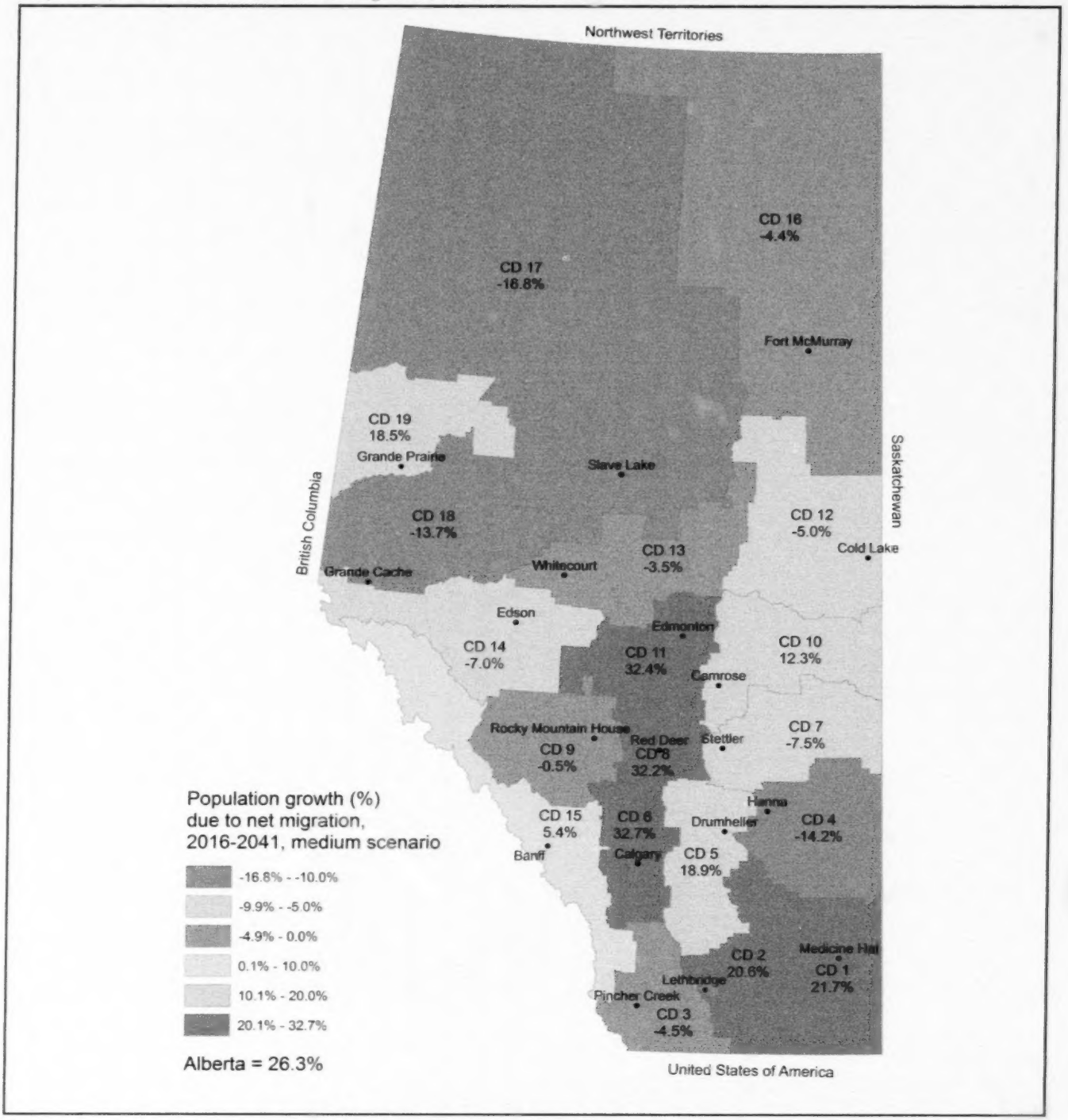
Appendix

Map 1: Population Growth Due to Natural Increase, 2016-2041, Medium Scenario



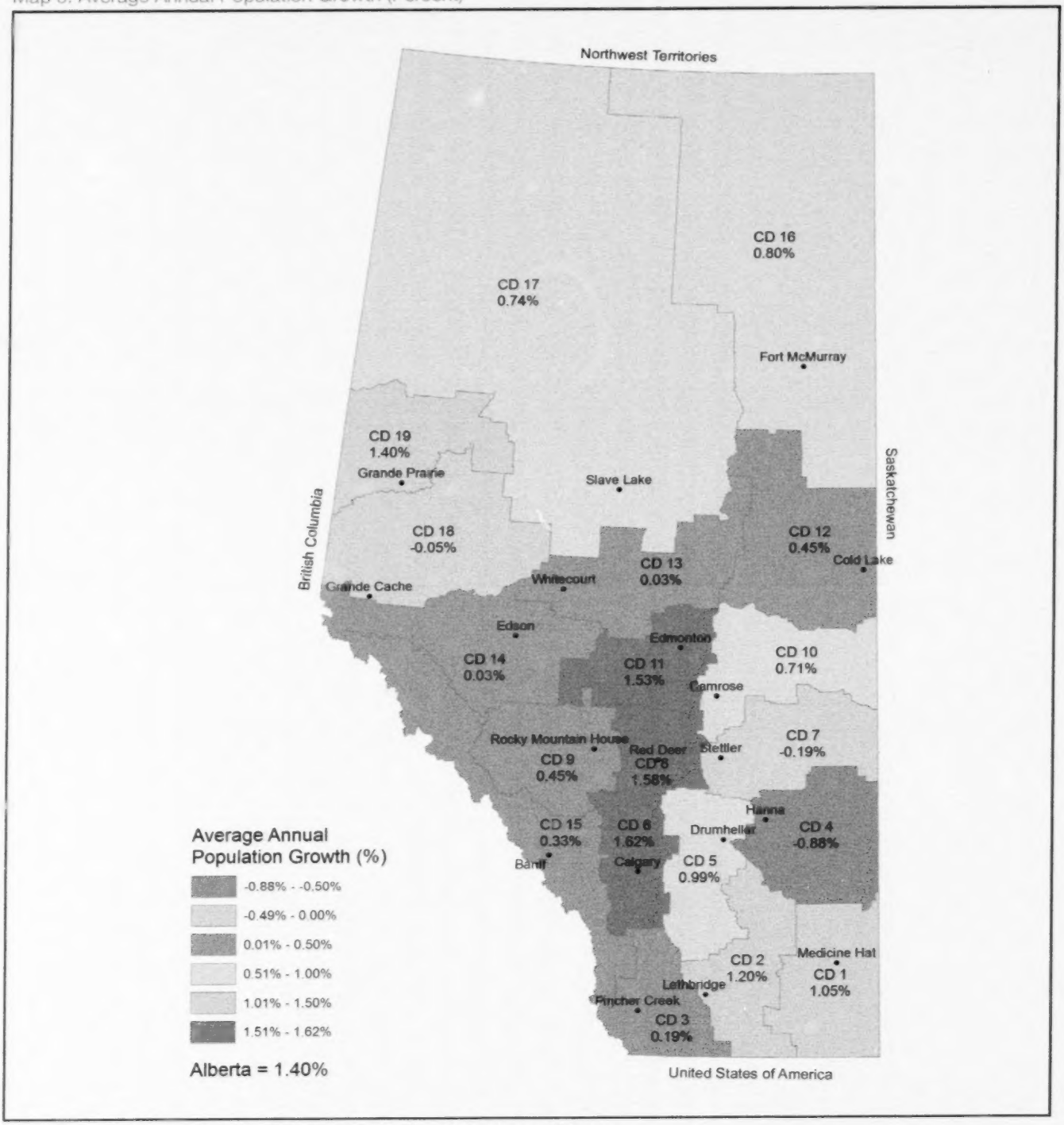
Sources: Statistics Canada and Alberta Treasury Board and Finance

Map 2: Population Growth Due to Net Migration, 2016-2041, Medium Scenario



Sources: Statistics Canada and Alberta Treasury Board and Finance

Map 3: Average Annual Population Growth (Percent)



Sources: Statistics Canada and Alberta Treasury Board and Finance